

REMARKS

This is in response to the Office Action mailed on September 14, 2005, and the references cited therewith.

Claims 1-33 are pending in this application.

§103 Rejection of the Claims

Claims 1-2, 6, 21-22 and 26-27 were rejected under 35 USC § 103(a) as being unpatentable over Trow et al. (U.S. 5,461,706) in view of Margadant (U.S. 6,606,089) and Ritter et al. (6,518,968). This rejection is respectfully traversed, as several assumptions about the references used in the rejection appear incorrect.

Trow et al. is cited in the Office Action as describing the representation of an arc in FIG.s 2 and 3. However, such representations are actually Bezier curves, as indicated in the Brief Description of the Drawings, and again at least at Col. 4, lines 48-56. The Bezier curves are used to represent non-linear, or curved surfaces on which an image is to be projected. Thus, they do not represent the arc, but rather a three dimensional surface on which a source video images is to be mapped. Since the interpretation of FIG.s 2 and 3 is incorrect, a *prima facie* case of obviousness has not been established, and the rejection should be withdrawn.

The Office Action goes on to say that the element “selecting multiple vertices of the arc” is shown in FIG. 3. However, Trow et al. at Col. 5 clearly describes that FIG. 3 is a construct of the Bezier curve that represents the surface on which images are to be projected, not the arc itself as claimed.

The Office Action also indicates that Trow et al. describes the use of trapezoids corresponding to the verticies. Again, it should be noted that Trow et al. uses the trapezoids or “control points” to define one or more Bezier curves. They are not used to define vertices of an arc as claimed.

The Office Action indicates that Trow et al., does not describe obtaining a texture map for mapping the texture to the trapezoids. However, Magadant is described in the Office Action as representing an arc with a texture map for mapping a trapezoid with reference to Col. 7, lines 17-45. Such language has been reviewed, and no such teaching has been found. Perhaps the Office Action was referring to Col. 7, lines 35-46 where it is described that a polygonal texture

may be distorted to appear correct on a display screen. “... however the target polygon—and thus the surface enclosed by it—is generally distored with respect to the source polygon; for example a source polygon which is a square can lead to a trapezoid as target polygon in the pictorial representation on the monitor.” This quoted language from Margadant clearly does not describe mapping textures to trapezoids to represent an arc as claimed. Thus, a further element has not been taught or suggested by any single reference, nor a combination of the references, and the rejection should be withdrawn.

The Office Action also references Ritters et al. as providing texture corrdinat gradient vectors calculated for bump mapping algorithm, and that the technique provides lighting effects that show the texture of the surface in such a way that the light and dark areas on the surface generated by the lighting will change in accordance with the changes in the positioning of the light source in the scene. Applicants fail to see how this alleged teaching relates to representing an arc with textures that transition from dark to light to dark as claimed. It seems that such a transition scheme might be counterproductive to the purpose of Ritters et al. In any event, the element of claim 1 is not shown, taught or suggested by this reference nor a combination of the references. Since a *prima facie* case of obviousness has not been established, the rejection should be withdrawn.

The combinations of references made in the Office Action are not believed proper. The Office Action must provide specific, objective evidence of record for a finding of a suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

There is no suggestion that is clearly identified, and further, due to the misconstruction of the references, the reasons for combining them are insufficient. In particular, Magadant is combined with Trow et al. simply because “it would have been obvious to a person of ordinary skill in the art use the texture maps for mapping texture to polygons or trapezoid, as taught by Margadant, into the a method for representing an arc of Trow to provide a pictorial representation of the arc through superposition of texture maps.” Not only does this not describe a suggestion from the art, it is based on incorrect statements of the teaching of each reference as

discussed above. Further, it is a mere conclusory statement of subjective belief, and insufficient to create a *prima facie* case of obviousness.

Ritters et al., is also combined with Trow et al. because: “It would have been obvious to the person of ordinary in the art to use the well-known bump mapping technique of Ritters et al into the rows and columns texture mapping of Trow (Figs. 4A and 4B) to provide lighting effects in the art representation of Trow.” Again, this is not a suggestion from the art, but rather a mere conclusory statement of subjective belief, and insufficient to create a *prima facie* case of obviousness.

Claims 2 and 6 depend from claim 1 and distinguish for at least the same reasons.

Claims 21-22 and 26-27 contain means plus function elements, which should be interpreted to cover the embodiments described as accomplishing the function. They are similar in scope to claim 1 and distinguish the references for at least the same reasons.

Claims 3-5 and 23-25 were rejected under 35 USC § 103(a) as being unpatentable over Trow in view of Margadant and Ritter as applied to claims 1-2 and 21-22 above, and further in view of Foley “Computer Graphics: Principles and Practice, Second Edition”. This rejection is respectfully traversed. These claims are believed allowable as being dependent on claims which were distinguished above and are believed allowable.

Claims 7-20 and 28-33 were rejected under 35 USC § 103(a) as being unpatentable over Trow in view of Margadant and Ritter as applied to claims 1 and 6 above, and further in view of Cosman (5,579,456). This rejection is respectfully traversed. Claims 7-12 depend from claim 1 and are believed allowable for at least the same reasons. Claims 13-20 describe a method of representing an arc with trapezoids and textures, and further with the addition of triangles. As described above, the reference do not contain such teaching, and the rejection should be withdrawn. Claims 28-33 are system claims of similar scope to claims 13-20 and are believed to distinguish the references for at least the same reasons.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6972 to facilitate prosecution of this application.

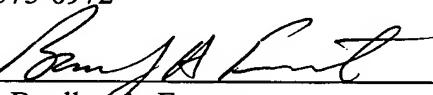
If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

By their Representatives,

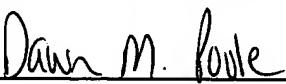
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Date 12-14-2005

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 14th day of December, 2005.

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